

ABSTRACT

The current invention relates to a unique and compact self-lock glazing mechanism for heavy glazing needs, composed of two aluminum extrusion profiles - a male profile and a female profile - designed in such a way to self-lock glass panels using rubber beading; the said glazing system functions when glass panel is placed on the setting blocks over the upper leg of the said female profile with a pair of spacers between the vertical tip of the said female profile and the said glass panel, and then the horizontal leg of the said male profile is inserted with its locking tip facing upward into the gap between the lower and upper legs of the said female profile; the locking tips of both the male and female profiles are then engaged by tilting the said male profile on its built-in fulcrum by pulling the vertical leg outward and introducing a pair of wedges into the space so created between the said glass panel and the said vertical tip of the male profile to keep the lock engaged and the said profiles get arrested; eventually the said glass panel is locked in the said glazing system; and the said mechanism further tightens its grip on the edges of the locked glass panel when the spacers and wedges are replaced by grooved rubber beadings of appropriate resilience which enables the said glass panel to remain in equilibrium throughout the life of the rubber beading; the introduction of the rubber beadings into the system lends a unique dynamism to the mechanism due to the built in fulcrum built in the said male profile, the inherent resilience of rubber causes a mating action in the said locking chamber and the resulting equal and opposite reaction keep the glass panel in an equilibrium; this balancing act of forces remains in the locking system throughout the life of the rubber beading as a dynamic phenomenon.

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